

REMARKS

I. Introduction

This paper is responsive to the final Office Action mailed December 8, 2010. The Applicants and undersigned thank Examiner Dowling for his consideration of the present application.

Claims 1-25 are pending. Of these, claims 1-9 stand allowed. Claims 11, 18 and 20 stand objected to as depending from a rejected base claim, but would otherwise be allowable. Claims 21-22¹ stand rejected under 35 U.S.C. § 102(b) in view of U.S. Patent No. 4,114,996 to Shaw. Claims 10, 12-17, 19 and 23-25 stand rejected under 35 U.S.C. § 103(a) over Shaw in view of U.S. Patent No. 4,253,749 to Boudouris.

The Applicants respectfully traverse the rejections and submit that all the pending claims are patentable, as explained below. Accordingly, the Applicants request that the U.S. Patent & Trademark Office (the "Office") issue a Notice of Allowance for the present application.

The Applicants, however, note to the Examiner that the late Mr. William Shaw was extremely well regarded in the image projection field and one of the founders of IMAX Corp., the Assignee of the present application and the Shaw reference.

¹ The Office Action identified "claims 20-21" as being anticipated by Shaw, but based on the analysis in the Office Action and designation of claim 20 as being objected to, Applicants have interpreted the rejection to apply to claims 21-22. Should Applicants be incorrect, the Examiner is respectfully requested to contact the undersigned by telephone to resolve the discrepancy.

II. Claims 21-22 are Patentable

Claims 21 and 22 are patentable over Shaw because (A) the Office failed to establish a *prima facie* case that Shaw teaches the identical invention in claims 21-22 and (B) Shaw does not teach the identical invention in either claims 21-22.

A. The Office failed to establish *prima facie* anticipation.

The Office must first present a *prima facie* case of unpatentability before any burden shifts to Applicants to bring forth evidence of patentability. *In re Oetiker*, 977 F.3d 1443, 1445 (Fed. Cir. 1992) ("The Examiner bears the initial burden on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.").

To establish a *prima facie* case of unpatentability for anticipation, the Office must find that each and every element as set forth in the claims is found, either expressly or inherently described, in a single prior art reference. MPEP § 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

The Office failed to establish *prima facie* anticipation because the Office failed to establish that each and every element of claim 21 is found in Shaw. Therefore, the Office did not meet its initial burden of presenting a *prima facie* case of unpatentability.

Specifically, the Office ignored, and offered nothing to establish that, "threading film through a film transport path automatically by the input drive assembly" in claim 21 is found in Shaw. In the "Detailed Action" section of the final Office Action, the Office failed

to identify any portion of Shaw that the Office believes discloses these features.² Final Office Action, p. 2, ¶ 1. Even in the “Response to Arguments” section in which the Office addressed Applicants’ previous remarks on this issue, the Office does not identify any teaching of Shaw that the Office believes discloses these features. Final Office Action, p. 5, ¶ 6. Instead, the Office included statements without any support of evidence of record. *See id.*

“If examination at the initial stage does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent.” *Oetiker*, 977 F.3d at 1445. That is the case here. Withdrawal of the rejection and allowance of claim 21, along with claim 22 that depends therefrom, is requested for at least this reason.

Should the Office continue to reject claims 21 and 22 over Shaw, the Applicants hereby call for “substantial evidence” pursuant to 37 C.F.R. § 1.104(d)(2) for all assertions of fact forming the bases for the rejection, including the statements on page 5, paragraph 6 of the final Office Action.

² The Applicants respectfully note that 37 C.F.R. § 1.104(c)(2) sets forth the minimum requirements that are necessary in an Office Action for the Office to validly reject claims:

§ 1.104 Nature of examination.

(c) Rejection of claims.

(2) In rejecting claims for want of novelty or for obviousness, the examiner must cite the best references at his or her command. When a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified.

As is the case here, with respect to Shaw, where a reference “describes inventions other than that claimed by the applicant,” Rule 1.104 **requires** that an Office Action “designate” portions as nearly as practicable.

B. Shaw fails to teach the identical invention claimed.

Anticipation under Section 102 requires that the applied reference teach the identical invention—every element of the claimed invention must be present in the reference and arranged as in the claim. *See, e.g., Richardson v. Suzuki Motor Co.*, 868 F.2d 1226 at 1236 (Fed. Cir. 1989).

Shaw does not teach the identical invention in claims 21 and 22 at least because Shaw does not teach “threading film through a film transport path automatically by the input drive assembly” in claim 21 as explained below.

i. *The Office incorrectly construed “threading.”*

Although not clear, the Office appears to construe “threading” as “transport[ing] film through a film advancement system” and, in any event, alleges “threading” is a broad recitation. Final Office Action, p. 5, ¶ 6. The Applicants traverse this construction.

The Office must construe claim terms according to the broadest reasonable meaning not in a vacuum, but in view of (1) the ordinary usage of the term as would be understood by one of ordinary skill in the art and (2) the written description contained in the specification. *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997) (Claims must be construed using “the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in the applicant’s specification.”)

“Threading” is a term commonly used in the film projection industry to refer to

loading or “setting up” film in a film transport **so that the film can subsequently be advanced (i.e. “running” the film) with a film transport.** That is, there is a distinct difference between “threading” film and “advancing” film – the former occurring before the latter.

The specification makes this clear. It states, “[a]uto loading may be defined, in one example, as the film transport system of the projection system being able to automatically thread film through the film transport path such that film appears at the output of the film transport system.” Specification, ¶ [0066]. After film is auto loaded by automatically threading film through the film transport path, “it is now possible that the projection system rotor 2 motor, sprocket 12 and 13 motors can be commanded to jog by the projectionist to get the film start frame to the start mark at the film transport input.” *Id.* at ¶ [0067].

The Applicants recognize that language from the specification should not be read into the claims, but that is not necessary here – claim 21 itself is directed to a “method of **auto loading film** in a film transport system” not to a method of advancing or running film. (Emphasis added.)

Accordingly, the Applicants submit that one of ordinary skill in the art, after reviewing the specification, would not construe “threading” as merely “transport[ing] film through a film advancement system.”

ii. *Shaw does not “auto load film” by automatic threading.*

After properly construing “threading,” it is clear that Shaw does not relate to “auto

loading film,” particularly by “threading film through a film transport path automatically by the input drive assembly,” as in claim 21. Instead, Shaw relates to advancing film after it has been loaded. Specifically, the mechanism in Shaw advances film using film loops, which occurs when the mechanism is running film – not when film is loaded or threaded into a film transport system. See Shaw, col. 2, lines 20-51.

That is, Shaw relates to projecting the film after it has been loaded, which prior to the innovations by the inventors of the present application occurred manually. Claim 21, by contrast, is directed to **auto loading film** by threading film through a film transport path **automatically**.

Accordingly, Shaw fails to teach the identical invention in claim 21, and claim 22 by dependency, at least because Shaw does not disclose “threading film through a film transport path automatically by the input drive assembly.” Withdrawal of the rejection and allowance of claims 21 and 22 is requested for at least this reason.

III. Claims 10, 12-17, 19 and 23-25 are Patentable

Claims 10, 12-17, 19 and 23-25 are patentable over Shaw and Boudouris because (A) the Office failed to establish a *prima facie* case that these claims are obvious and (B) even if a reason existed to combine reference teachings, the combination does not teach or suggest the invention in any of these claims.

A. The Office failed to establish *prima facie* obviousness.

The Office bears the initial burden of providing a *prima facie* case for obviousness that is supported factually. MPEP § 2142. To establish *prima facie* obviousness, the Office Action must show, based on evidence of record, that the cited references disclose or suggest each claimed element **and** that it would have been obvious to combine teachings in the references together to arrive at the claimed invention. See MPEP §§ 2141 and 2143; *KSR Int'l Co. v. Teleflex, Inc.*, 550 US 398 (2007). This showing requires Examiners to determine whether there was an apparent reason supported by evidence of record to combine elements in references and to articulate that reason. See *KSR Int'l Co. v. Teleflex, Inc.* 550 U.S. at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)); *In re Lee*, 277 F.3d 1338, 1342, 1344 (Fed. Cir. 2002).

The Office did not meet these requirements here for the reasons explained below and thus the rejection should be withdrawn.

1. *The Office failed to find that the references disclose or suggest each claimed element.*

Claim 10 requires “a controller for controlling a speed profile of the variable speed drive assembly to control a speed at which the film is fed into the rotor gap to form the film loop.” Claim 23 requires “a controller for controlling a speed profile of the variable speed drive assembly to control a speed at which the film is fed into the film transport.”

The Office made no finding that Shaw and/or Boudouris teaches or suggests “a controller,” much less a controller controlling a speed profile of a variable speed drive

assembly. Instead, the Office alleged that Boudouris discloses, “sprockets 12 and 15 are driven with a constant speed and sprockets 13 and 14 are driven intermittently” and concluded that “the complete mechanisms each comprises ‘variable speed drive assemblies.’” Final Office Action, p. 4. The Office made no allegation or pointed to any evidence that Shaw or Boudouris discloses “a controller.” Claims 10, 12-17, 19 and 23-25 are therefore patentable for at least this reason. Withdrawal of the rejection and allowance of these claims is requested.

These claims include other features for which the Office made no finding (or did not support a finding with evidence) that the cited references teach or suggest. These other features include at least the following:

- a film transport path for transporting film (claims 10 and 23);
- an input drive assembly for advancing film through the film transport path (claims 10 and 23);
- an output drive assembly for advancing film out of the film transport (claims 10 and 23);
- wherein the film forms a film loop in the rotor gap and the rotor gap is capable of moving the film loop to engage and disengage the film from the at least one registration pin (claim 10);
- a film loop transport (claim 23);
- all of claim 14;
- all of claim 15;
- all of claim 16;
- all of claim 17;
- at least one air guide surface (claim 19);
- a valve for controlling the flow of air through the air tip, wherein the air from the air flow tip is directed at least in part by the air guide surface onto the film (claim 19); and
- all of claim 25.

"All words in a claim must be considered in judging the patentability of that claim against the prior art." MPEP § 2143.03 quoting *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). The Office failed to establish *prima facie* obviousness for these reasons as well. Therefore, the rejection should be withdrawn and claims 10, 12-17, 19 and 23-25 allowed.

Should the Office continue to reject one or more of these claims over Shaw and/or Boudouris the Applicants hereby call for "substantial evidence" pursuant to 37 C.F.R. § 1.104(d)(2) for all assertions of fact forming the bases for the rejection.

2. *The Office failed to find articulate an apparent reason supported by evidence of record to combine reference teachings .*

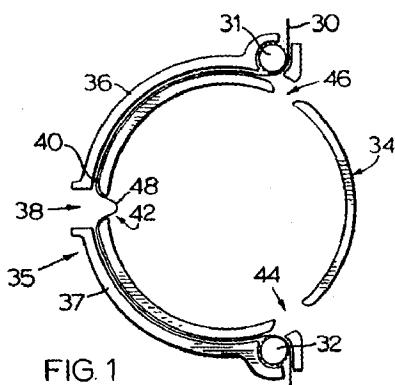
The Office concluded that "[i]t would have been obvious to one of ordinary skill in the art to provide variable motors to control the film sprockets and rotor speed in Shaw by the user of pairs of sprockets, as taught by Boudouris, in order to allow for control of the film feeding speed for forming the film loops, as desired" and that "[i]t would have been obvious to allow for a change in timing operation, i.e. how fast each frame is positioned or stays in the aperture because it is well known to operate devices at different speeds on different occasions and situations." Final Office Action, p. 4.

The critical issue – why one would have combined teachings from Boudouris with those of Shaw – is left unaddressed by the Office, and in any event not supported with substantial evidence. Specifically, what evidence in the record provides a reason why one would have combined Boudouris with Shaw "to allow for control of the film feeding speed

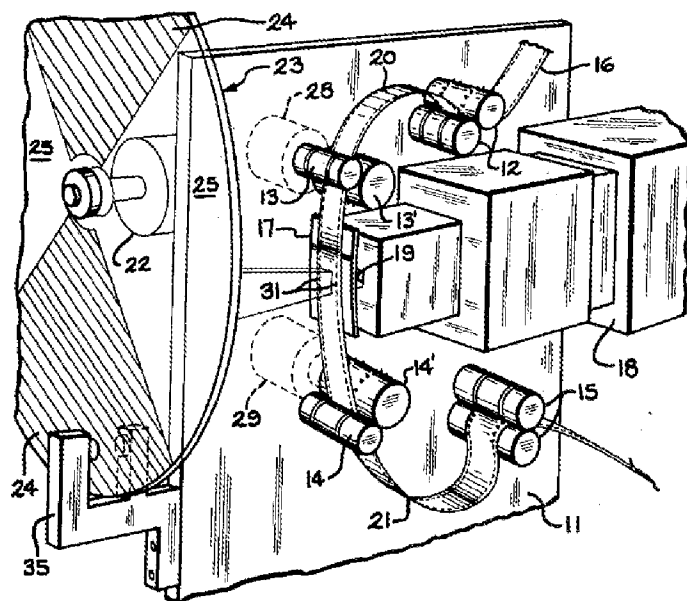
for forming the film loops, as desired”? According to the Office’s interpretation, Boudouris provides a perfectly acceptable system for doing so. Why would one of ordinary skill have modified Shaw?

Moreover, the MPEP is clear that merely because something was purportedly “well known” is not sufficient to establish *prima facie* obviousness. MPEP § 2143.01(IV) (Just “because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references.”). Accordingly, even if it was “well known to operate devices at different speeds on different occasions and situations,” that does not establish *prima facie* obviousness. In any event, the Office has failed to establish that it was “well known to operate devices at different speeds on different occasions and situations.” The Office alleged that Boudouris discloses intermittently driving sprockets, not operating sprockets at different speeds on different occasions and situations.

Furthermore, the Applicants submit that no reason existed to modify Shaw with teachings from Boudouris. No reason existed to include Boudouris’ intermittently driven sprockets in a rotor loop system, such as Shaw, that includes a rotor gap. Specifically, no reason existed to use sprockets 13, 14 to advance film one frame to a light gate from Boudouris in Shaw, which uses a rotor system with gaps to position one film frame at a projected aperture. See Boudouris, col. 3, lines 52-58, col. 4, line 51 – col. 5, line 7; Shaw, col. 2, lines 52-66. That is, no reason existed to modify this rotor and gap of Shaw:



with this sprocket, rotor-less system in Boudouris:



Combining Boudouris and Shaw in the manner proposed by the Office would destroy the rotor and gap feature of Shaw, rendering Shaw unsatisfactory for its intended use and changing its principle of operation. MPEP § 2143.01(V)(VI) Accordingly, the Applicants submit that there was no reasonable expectation that modifying Shaw with intermittent sprockets of Boudouris would have succeeded, particularly with Shaw's rotor gap.

For at least these reasons, the Office failed to establish *prima facie* obviousness and obviousness cannot be shown. Withdrawal of the rejection and allowance of claims 10, 12-17, 19 and 23-25 is requested.

B. The combination fails to teach or suggest the claims.

Shaw and Boudouris, individually or in combination fail to teach or suggest at least “a controller for controlling a speed profile of the variable speed drive assembly to control a speed at which the film is fed into the rotor gap to form the film loop,” as in claim 10 and “a controller for controlling a speed profile of the variable speed drive assembly to control a speed at which the film is fed into the film transport,” as in claim 23.

Even if Boudouris’ sprockets 13 and 14 are “driven intermittently” as contended by the Office, such teaching is not a variable speed drive assembly to control a speed of film being fed into film transport. Instead, the purpose of sprockets 13 and 14 in Boudouris is to advance film as quickly as possible so that the frame settles on index pin 31 in front of the light gate so that the image can be projected. *See, e.g.*, Boudouris, col. 4, lines 27-63. Then, after a predetermined amount of time, the frame is quickly advanced to the next frame. *See id.* Neither Boudouris nor Shaw disclose or suggest varying the speed of film to feed film into the film transport for purposes of controlling the speed at which the film is fed.

Accordingly, Boudouris and Shaw, individually or in combination, fail to disclose or suggest claims 10 and 23, along with dependent claims 12-17, 19 and 24-25. Withdrawal of the rejection and allowance of these claims for this reason is requested.

IV. Conclusion

The above amendments and remarks completely respond to the Office Action and place the application in condition for allowance, which is respectfully requested. If any additional fees are due for this submission, the fees may be charged to Deposit Account number 11-0855. If there are any matters that can be addressed by telephone, the Examiner is urged to contact the undersigned attorney at 404-745-2520.

Respectfully submitted,

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